San Luis & Delta-Mendota Water Authority
San Joaquin Valley Drainage Authority
San Joaquin River Exchange Contractors Water Authority
Grassland Basin Drainers

Salinity-1/31/06
Workshop

January 20, 2006

Sclicia Potter
Acting Clerk to the Board
State Water Resources Control Board
P. O. Box 100
Sacramento, CA 95812-0100

Delivered via email: commentletters@waterboards.ca.gov
and Fax: 916-341-5620

SUBJECT: Presentation at January 31, 2006 Workshop

Dear Ms. Potter:

The San Luis & Delta-Mendota Water Authority and the San Joaquin Valley Drainage Authority are joint powers agencies comprised of entities located on the west side of the San Joaquin Valley that receive water from the Central Valley Project and that participate in regulatory programs for agricultural drainage management. They, along with the entities listed above, are submitting joint comments for the workshop on Salinity Issues in the San Joaquin Valley on January 31, 2006.

We would like to make a coordinated presentation at the workshop scheduled for January 31, 2006 on behalf of our agencies and our members. We anticipate that we will have three speakers and request a block of twenty minutes for the presentation. I serve as the watershed coordinator for the Westside San Joaquin River Watershed Coalition, the drainage coordinator for the Grassland Bypass Project, project manager for the Upstream Dissolved Oxygen Monitoring Studies, and as a consultant to many west side water and drainage entities. Dennis Falaschi is the General Manager of Panoche Drainage District, which is the largest participant in the Grassland Bypass Project and which owns and is the principal operator of the San Joaquin River Improvement Project. Chris White is the General Manager of Central California Irrigation District and one of the leaders in the development of the Westside Regional Drainage Plan.

Due to the interrelated information on salinity issues and solutions, we would appreciate this panel being scheduled immediately following the presentation given by Byron Buck on behalf of the San Joaquin River Water Quality Management Group.

We look forward to the opportunity to provide the Board with information on the significant and coordinated efforts to manage salinity ongoing on the Westside of the San Joaquin Valley. Our joint written comments are enclosed.

If you have any questions I can be reached at:
P. O. Box 1122
Hanford, CA 93232
Phone 559-582-9237
Fax 559-582-7632
Email: jmcgahan@summerseng.com

Very truly yours,

Joseph C. McGahan

San Luis & Delta-Mendota Water Authority
San Joaquin Valley Drainage Authority
San Joaquin River Exchange Contractors Water Authority
Grassland Basin Drainers

January 20, 2005

Sclicia Potter
Acting Clerk to the Board
State Water Resources Control Board
P. O. Box 100
Sacramento, CA 95812-0100

Delivered via email: commentletters@waterboards.ca.gov
and Fax: 916-341-5620

Subject: Comments on Workshop on Salinity Issues in the Central Valley

These joint comments are being submitted on behalf of the San Luis & Delta-Mendota Water Authority (Water Authority) and its members[1] and the San Joaquin Valley Drainage Authority (Drainage Authority) and its members[2] and the entities listed above. The Water Authority is a joint powers agency made up of 32 public agencies that receive Central Valley Project water pumped at the Tracy Pumping Plant and delivered through the Delta-Mendota and San Luis Unit facilities. The Drainage Authority is a joint powers agency formed to represent its member agencies on issues related to drainage and related regulatory issues. The purpose of these comments are to provide evidence of the many actions being taken by the Water Authority, Drainage Authority and their members to

[1] Members of the San Luis & Delta-Mendota Water Authority include: Banta-Carbona Irrigation District, Broadview Water District, Byron Bethany Irrigation District, Central California Irrigation District, Centinella Water District, City of Tracy, Columbia Canal Company, Del Puerto Water District, Eagle Field Water District, Firebaugh Canal Water District, Fresno Slough Water District, Grassland Water District, James Irrigation District, Laguna Water District, Mercy Springs Water District, Oro Loma Water District, Pacheco Water District, Pajaro Valley Water Management Agency, Panoche Water District, Patterson Irrigation District, Pleasant Valley Water District, Reclamation District 1606, San Benito County Water District, San Luis Canal Company, San Luis Water District, Santa Clara Valley Water District, Tranquillity Irrigation District, Turner Island Water District, West Side Irrigation District, West Stanislaus Irrigation District, Westlands Water District and Widren Water District

[2] Members of the San Joaquin Valley Drainage Authority include: Broadview Water District, Del Puerto Water District, Pacheco Water District, Panoche Drainage District, Patterson Irrigation District, San Joaquin River Exchange Contractors Water Authority, Tranquillity Irrigation District/Fresno Slough Water District, Tulare Lake Drainage District, Twin Oaks Irrigation District, Westlands Water District and West Stanislaus Irrigation District

address salinity management and to improve water quality in the San Joaquin River and Delta. A map of the Water Authority has been included in **Attachment 1.**

Water Authority members have ongoing a long list of projects to manage drainage discharges and impact salinity in the San Joaquin River. These include the Grassland Bypass Project, Westside Regional Drainage Plan, Watershed Coalitions, Development of Best Management Practices, and participation in the San Joaquin River Water Quality Management Group.

Grassland Bypass Project

The Grassland Bypass Project was implemented in 1996 to manage discharges of subsurface drainage water that historically went into wetland channels, Mud and Salt Slough and the San Joaquin River. Participants include the Broadview Water District, Charleston Drainage District, Firebaugh Canal Water District, Pacheco Water District, Panoche Drainage District, Widren Water District and the Camp 13 Drainage District (located in part of Central California Irrigation District) whose boundaries encompass approximately 97,000 gross acres of irrigated farmland on the westside of the San Joaquin Valley. The Bypass Project is based on a Use Agreement between the U. S. Bureau of Reclamation (Bureau) and the Water Authority making a section of the San Luis Drain available to convey subsurface drainage around sensitive wetlands. The Regional Board has issued joint waste discharge requirements to the Water Authority and the Bureau for the project. The Bureau has supported the project by funding some of the monitoring costs and by various grants for treatment, as well as through oversight. A loan from the SWRCB was used for construction and has now been repaid. The benefits of the project are well documented. In 2004 the salt load was reduced by 51% from pre-project conditions in 1995. The salt load discharged from this area in 1995 amounted to approximately 17% of the salt load at Vernalis, so this reduction has reduced the Vernalis salt load by approximately 9% from 1995 levels.

The local agencies that participate in the Grassland Bypass Project and their farmers have achieved this reduction through aggressive implementation of management practices, including improved irrigation methods to reduce the production of subsurface drainage water, recirculation projects to mix a portion of subsurface drainage water with irrigation supply water to reduce drainage discharges, and drainage reuse, where subsurface drainage water is used on salt tolerant crops again to reduce discharges. Research is also ongoing to develop treatment that will remove salt from the drainage water, resulting in a re-usable low salt supply and with the goal of achieving zero-discharge of subsurface agricultural drainage from the Project area to the San Joaquin River by 2010. This would result in a 17% reduction of the total salt load at Vernalis over 1995 levels. In addition, the lands within Broadview Water District have been removed from irrigated production agriculture, and as a result, the Broadview drainage discharges have been eliminated.

The final stages of the reduction of discharges from the Grassland Bypass Project are being developed through the Westside Regional Drainage Plan. This is a locally-developed plan to reduce, manage and dispose of agricultural drainage in order to meet

address salinity management and to improve water quality in the San Joaquin River and Delta. A map of the Water Authority has been included in **Attachment 1**.

Water Authority members have ongoing a long list of projects to manage drainage discharges and impact salinity in the San Joaquin River. These include the Grassland Bypass Project, Westside Regional Drainage Plan, Watershed Coalitions, Development of Best Management Practices, and participation in the San Joaquin River Water Quality Management Group.

Grassland Bypass Project

The Grassland Bypass Project was implemented in 1996 to manage discharges of subsurface drainage water that historically went into wetland channels, Mud and Salt Slough and the San Joaquin River. Participants include the Broadview Water District, Charleston Drainage District, Firebaugh Canal Water District, Pacheco Water District, Panoche Drainage District, Widren Water District and the Camp 13 Drainage District (located in part of Central California Irrigation District) whose boundaries encompass approximately 97,000 gross acres of irrigated farmland on the westside of the San Joaquin Valley. The Bypass Project is based on a Use Agreement between the U. S. Bureau of Reclamation (Bureau) and the Water Authority making a section of the San Luis Drain available to convey subsurface drainage around sensitive wetlands. The Regional Board has issued joint waste discharge requirements to the Water Authority and the Bureau for the project. The Bureau has supported the project by funding some of the monitoring costs and by various grants for treatment, as well as through oversight. A loan from the SWRCB was used for construction and has now been repaid. The benefits of the project are well documented. In 2004 the salt load was reduced by 51% from pre-project conditions in 1995. The salt load discharged from this area in 1995 amounted to approximately 17% of the salt load at Vernalis, so this reduction has reduced the Vernalis salt load by approximately 9% from 1995 levels.

The local agencies that participate in the Grassland Bypass Project and their farmers have achieved this reduction through aggressive implementation of management practices, including improved irrigation methods to reduce the production of subsurface drainage water, recirculation projects to mix a portion of subsurface drainage water with irrigation supply water to reduce drainage discharges, and drainage reuse, where subsurface drainage water is used on salt tolerant crops again to reduce discharges. Research is also ongoing to develop treatment that will remove salt from the drainage water, resulting in a re-usable low salt supply and with the goal of achieving zero-discharge of subsurface agricultural drainage from the Project area to the San Joaquin River by 2010. This would result in a 17% reduction of the total salt load at Vernalis over 1995 levels. In addition, the lands within Broadview Water District have been removed from irrigated production agriculture, and as a result, the Broadview drainage discharges have been eliminated.

The final stages of the reduction of discharges from the Grassland Bypass Project are being developed through the Westside Regional Drainage Plan. This is a locally-developed plan to reduce, manage and dispose of agricultural drainage in order to meet

the continued reductions required for the Grassland Bypass Project and directed toward achieving zero discharge. Through implementation of the Westside Regional Drainage Plan, lands presently served by the Grassland Bypass Project would continue to receive drainage service allowing for the lands to maintain a salt balance so that agricultural productivity is not impaired.

San Joaquin River Water Quality Improvement Project (SJRIP)

A key component of the efforts under the Grassland Bypass Project to reduce the discharges of high salinity and selenium drainage water to the San Joaquin River has been the SJRIP. The project was initiated with funds provided from Proposition 13 for the purchase and improvement of 4,000 acres of land within the Grassland Drainage Area. The first phase of the SJRIP was implemented in the winter of 2001 with the planting of salt tolerant crops and construction of distribution facilities. In 2001 1,821 acres were irrigated with drainage water or blended water. This resulted in a displacement of 1,025 pounds of selenium, 14,500 tons of salt and 62,000 pounds of boron, which were prevented from discharging to the Grassland Bypass Project and to the San Joaquin River. The SJRIP serves all of the land participating in the Grassland Bypass Project, either through direct delivery of drainage for reuse, or through a load trading program. **Attachment 2** shows the annual drain water reuse by the SJRIP, including the selenium, salt, and boron loads that were prevented from being discharged to the San Joaquin River.

Since 2002, funding assistance from the Central Valley Regional Water Quality Control Board, U.S. Bureau of Reclamation, CalFed, and the U.S. Department of Agriculture has helped develop the SJRIP. Currently, 3,100 acres of the SJRIP have been planted with pastures like bermuda, and fescue, salt tolerant forage grasses like jose tall wheatgrass, halophytes like paspalum, and other miscellaneous crops like asparagus, sunflowers, and pistachios. This financial assistance has also helped with the construction of the pump stations and pipelines that move the drain water to the fields for irrigation.

The SJRIP project is the key for the Grassland Drainage Area as a whole to meet the near-term selenium load limits. However, by 2010, the selenium water quality objective of 5 ppb will need to be met in Mud Slough, effectively shutting down the Grassland Bypass and San Luis Drain. To address this, the Grassland Area Farmers are key participants in an in-valley solution developed as the Westside Regional Drainage Plan (see below). The SJRIP will be the cornerstone of this solution, along with source control (irrigation and delivery improvements), recirculation, and drainage treatment.

Westside Regional Drainage Plan

One tool being developed to manage agricultural drainage from the westside of the San Joaquin Valley is the Westside Regional Drainage Plan (WSRDP). The WSRDP is an integrated plan with the goal to eliminate irrigated agricultural drainage water discharge to the San Joaquin River from about 90,000 acres in the Grassland Drainage area as shown in **Attachment 3**. The WSRDP began as a successful effort to reduce selenium discharges to the San Joaquin River. It is now being proposed for expansion to go

beyond regulatory requirements and eliminate selenium and salt discharges to the River from these lands, while maintaining productivity of production agriculture in the region. It is also key to solving disputes among neighboring water and drainage districts regarding localized impacts of agricultural drainage and a portion of the US Bureau of Reclamation's obligation to provide drainage to the region.

The WSRDP relies on five general tactics to reduce and then eliminate high salinity irrigation drainage from these lands:

1) Reduction of drainage volumes to be managed through source control/efficient water management techniques such as replacement of furrow irrigation with micro-irrigation technology, and lining or piping of unlined delivery canals;
2) Recirculation of drainage water on primary irrigation lands;
3) Collection and reuse of tile drainage water on salt tolerant and halophytic crops in order to concentrate drainage;
4) Installation of groundwater wells to lower groundwater in strategic locations to eliminate groundwater infiltration into tile drains.
5) Treatment and disposal of remaining drainage water through reverse osmosis, evaporation and disposal or beneficial reuse of salts. This last process removes the salt from the system effectively providing a salt balance to the affected lands.

The use of these techniques and the consequent reduction in drain water is graphically displayed in **Attachment 4.**

With about 4,000 acres of land currently being used as drainage water re-use area, reductions of salt discharges through the San Luis Drain and into Mud Slough, and then to the San Joaquin River have decreased. Further actions on the WSRDP through additions of more reuse lands and drainage improvements to existing and new lands, with ultimate treatment of concentrated brine, will eliminate the remaining discharge.

Current plans are to concentrate the remaining salt into a dry solid for disposal in a landfill. There is currently an ongoing research project investigating the means to separate the salts for other beneficial uses.

A substantial benefit of this WSRDP, found through analysis by the San Joaquin River Water Quality Management Group, is that it assures compliance with water quality salinity objectives at Vernalis.

The WSRDP encompasses and integrates six of the nine eligible project types under the Proposition 50 Chapter 8 Program for Implementation Grants. It builds on millions of dollars in federal and state research and planning expenditures over the past thirty years, attempting to reach a solution to agricultural drainage concerns in the West side of the San Joaquin Valley.

About $40 million has been spent on the Plan thus far and another $92 million is necessary to complete the Plan's implementation over the next four years as shown in **Attachment 5**. Local, state and federal funding is being pursued to implement this plan, including applications through the Proposition 50 IWRM grant program and the SWRCB's Consolidated Grant Application Program. The SWRCB can support the implementation of this Plan and assure achievement of water quality objectives for salinity at Vernalis by supporting funding for this program.

Link Between the Westside Regional Drainage Plan and Reclamation's San Luis Drainage Feature Re-evaluation EIS

As stated above, the local agencies have been proactive in addressing water quality concerns in their respective service areas and developing and implementing solutions. This action has been necessary as a result of the United States having yet to provide drainage service as mandated in the San Luis Act enacted by Congress in 1960 and as mandated in existing water service contracts with the Bureau of Reclamation.

Last year, the Bureau of Reclamation released its Draft San Luis Unit Feature Re-evaluation (SLUFRE) which includes several alternatives for providing drainage service to the lands within the San Luis Unit including the Grasslands By-Pass service area. In fact, the SLUFRE incorporates elements similar to the WSRDP; however, the local agencies believe the WSRDP can be implemented on an advanced schedule. Reclamation is expected to finalize the SLUFRE in June 2006 and the local agencies will be cooperating with Reclamation on the respective plans.

Watershed Coalitions

The Westside San Joaquin River Watershed Coalition and the Westlands Storm water Coalition were formed to act as Coalition Groups under the Central Valley Regional Board's Irrigated Lands Conditional Waiver Program (Ag Waiver). Each Coalition has obtained a Coalition Group Conditional Waiver of Waste Discharge Requirements.

The Westside Coalition program includes approximately 500,000 acres of land, most of which is within boundaries of the Water Authority. The Westside Coalition is comprised of the lands within Del Puerto Water District, Patterson Irrigation District, the San Joaquin River Exchange Contractors Water Authority (which includes Central California Irrigation District, San Luis Canal Company, Henry Miller Reclamation District, Firebaugh Canal Water District, and Columbia Canal Company), Tranquillity Irrigation District/Fresno Slough Water District, Twin Oaks Irrigation District, West Stanislaus Irrigation District, Oak Flat Water District, El Solyo Water District, Stevinson Water District, White Lake Mutual Water Company, Lone Tree Mutual Water Company, Turner Island Water District and individual lands outside of these districts. Grassland Water District/Grassland Resource Conservation District, State Refuges managed by the California Department of Fish and Game, and Federal Refuges managed by the U. S. Fish & Wildlife Service are also part of the Westside Coalition. Irrigated lands within the area ultimately drain to the San Joaquin River. The Ag Waiver program requires watershed

coalitions to monitor water quality in the watershed, synthesize and report on ongoing water quality and irrigation practices, and to implement actions and projects to comply with water quality objectives in the San Joaquin River and tributaries. The Ag Waiver is also envisioned as the tool that will be used to comply with the salt and boron TMDL and other regulatory programs of the Regional Board. The monitoring program for the Ag Waiver includes 19 monitoring stations on the westside of the San Joaquin River. The monitoring stations are located on tributaries to the San Joaquin River that are dominated by agricultural runoff and measure more than 50 different parameters (including a scan of 30 organophosphorus pesticides). This program has been successful in identifying problem areas and has resulted in a number of meetings with growers, pest control advisors, and applicators to increase awareness and explore solutions to those water quality issues. As discussed below, the Westside Watershed Coalition is developing best management practices to implement water quality improvement measures.

The Westlands Storm water Coalition includes approximately 605,000 acres within the Westlands Water District, also within the Water Authority, and was formed to comply with the Ag Waiver program related to storm water discharges. There are no surface ag discharges to the San Joaquin River from these lands.

Development of Best Management Practices

Water Authority members and other parties such as the Westside Resource Conservation District, the West Stanislaus Resource Conservation District, the State Department of Pesticide Regulation, the State Department of Water Resources and the Natural Resources Conservation Service have ongoing 39 different projects to develop a wide range of best management practices within the Water Authority boundaries. The purpose of these grants is to develop the tools to better manage water supplies and drainage discharges. They include the construction of regional tailwater return systems, installation of improved irrigation systems, and development of management practices that can be implemented to comply with ongoing regulations including the Ag Waiver and existing and proposed TMDL's, such as the existing selenium TMDL, proposed salt/boron and dissolved oxygen TMDL's and the future pesticide TMDL. The projects also include the Upstream Dissolved Oxygen Monitoring studies requested by the California Bay Delta Authority to help determine causes of low dissolved oxygen in the Stockton Deep Water Ship Channel. The projects have a value of over $40 million and are scheduled for completion within the next 4 years. **Attachment 6** is a listing of these projects.

San Joaquin River Water Quality Management Group

State and Federal law mandates plans to meet San Joaquin River Water Quality objectives. The assistance of the San Joaquin River Water Quality Coalition was enlisted to help with this process. The Final Report from this group is dated August, 2005. This is an informal stakeholder group comprised of DWR, Bureau of Reclamation, California Department of Fish and Game, US Fish and Wildlife Service, and local water agencies. It was formed to develop a management plan to achieve the Vernalis salinity objective

and also to provide a plan to address dissolved oxygen water quality issues in the Stockton Deep Water Ship Channel. The group looked at both flow-related and discharge-related actions that could be implemented. The final report from the Group recommends support of the Westside Regional Drainage Plan as one of the primary tools to ensure compliance with the salinity objective.

Conclusion

Water Authority and Drainage Authority members are actively pursuing projects that will manage salinity in irrigated agriculture in the San Joaquin Valley and improve water quality in the San Joaquin River. They are fully engaged in the Regional Board's regulatory processes addressing salinity in discharges from irrigated agriculture. They are aggressively developing projects with the Bureau of Reclamation, DWR, the SWRCB, and through local initiatives. These have resulted and will continue to result in decreased salinity inputs from their areas, and therefore, improvements in water quality in the San Joaquin River and Delta. The Water Authority and Drainage Authority members have long agreed with the Regional Board's policy favoring out of valley disposal of salts. However, given current political and economic realities, we do not see such disposal as realistically available. The Water Authority and Drainage Authority members therefore have developed and support the Westside Regional Drainage Plan for in-valley treatment and disposal. We anticipate that it will be able to provide a salt balance to allow continued and sustainable agriculture on the westside, and that technology for treatment of agricultural drainage and reduction of salts to solids for storage is rapidly developing and will be timely available.

Our concern is that additional regulation will divert resources and focus from implementation of identified solutions, increase conflicting mandates, and in general inhibit the progress of these local efforts. The key item needed at the current time is the funding to develop these local efforts. We would request that the State Board and the Regional Board assist our efforts along those lines. This will give the quickest benefit to management of salinity in the west side and water quality improvements.

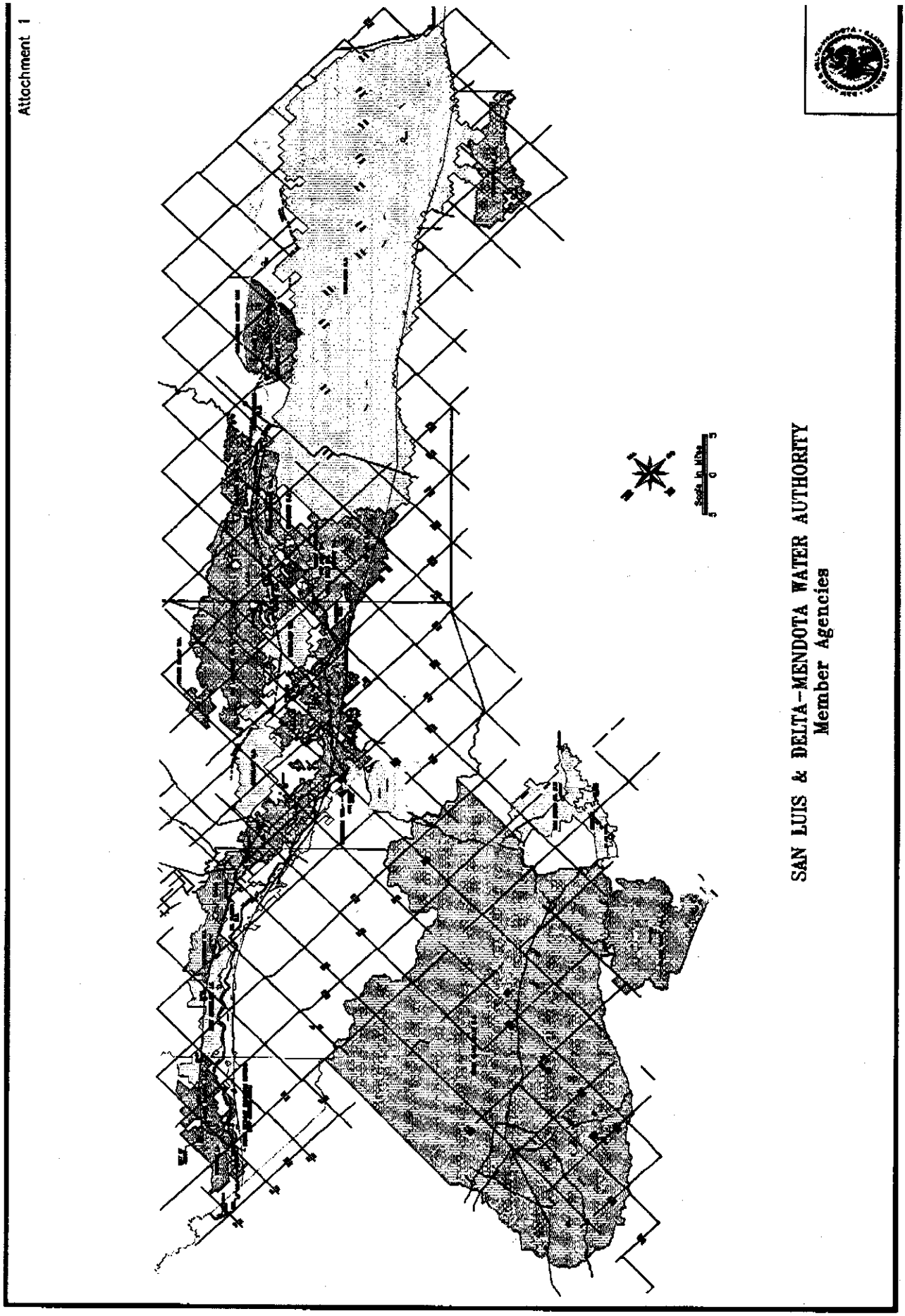
List of Attachments

1 – Map of Water Authority
2 - Displacement by SJRIP
3 – Grassland Drainage Area
4 – WSRDP Drain Reduction Schematic
5 – WSRDP Budget
6 – BMP Projects

Attachment 1

SAN LUIS & DELTA-MENDOTA WATER AUTHORITY
Member Agencies

Attachment 1



SAN LUIS & DELTA-MENDOTA WATER AUTHORITY
Member Agencies

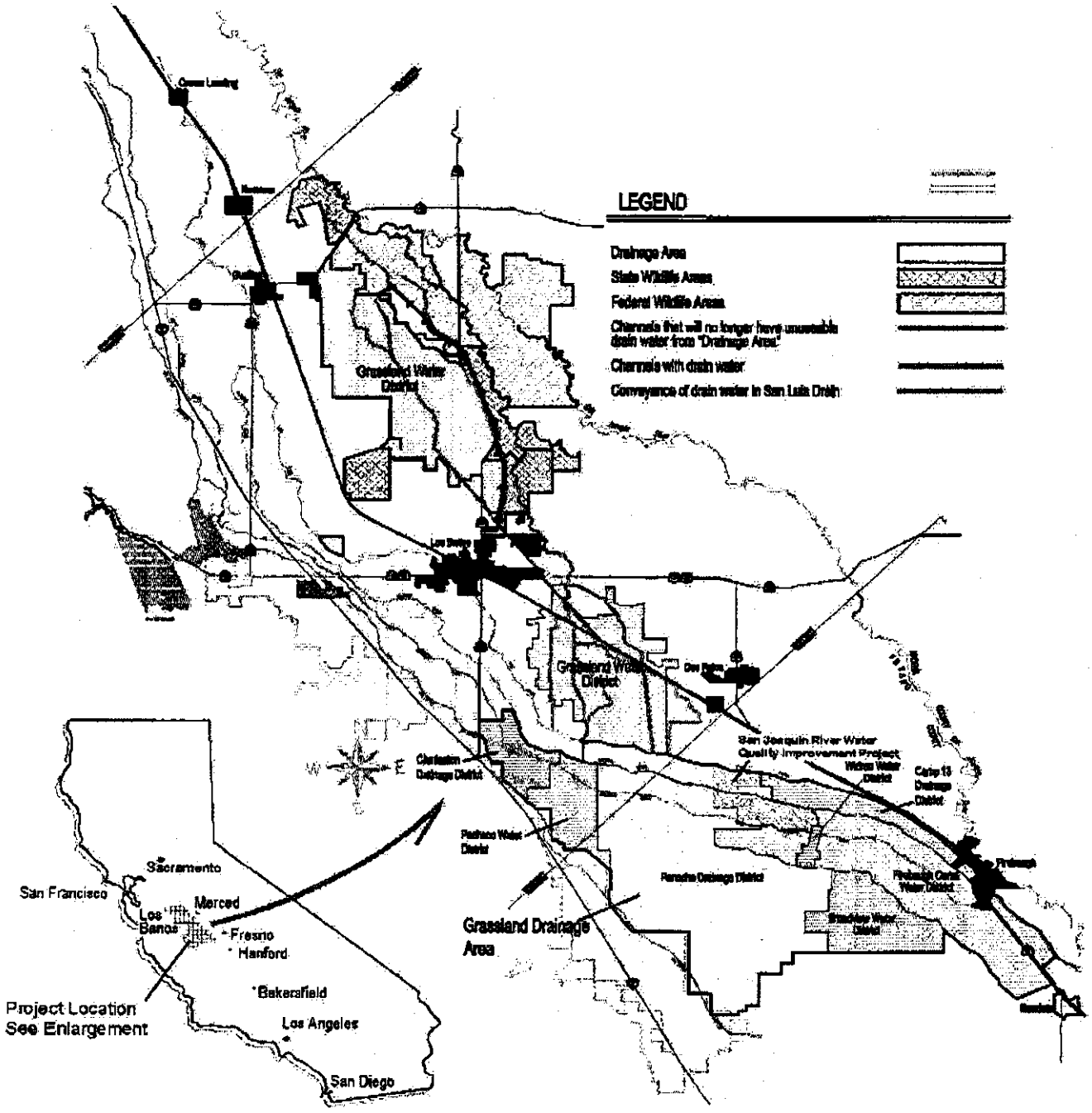
Attachment 2

Water Year	Reused Drain Water	Displaced Selenium	Displaced Boron	Displaced Salt
	(acre feet)	(pounds)	(pounds)	(tons)
1998*	1,211	329	NA	4,608
1999*	2,612	321	NA	10,230
2000*	2,020	423	NA	7,699
2001	2,850	1,025	61,847	14,491
2002	3,711	1,119	77,134	17,715
2003	5,376	1,626	141,299	27,728
2004	7890	2,417	193,956	41,444
2005	8143	2150	210,627	40,492

NA = Not Available

*PDD drainage reuse project prior to SJRIP

Attachment 3

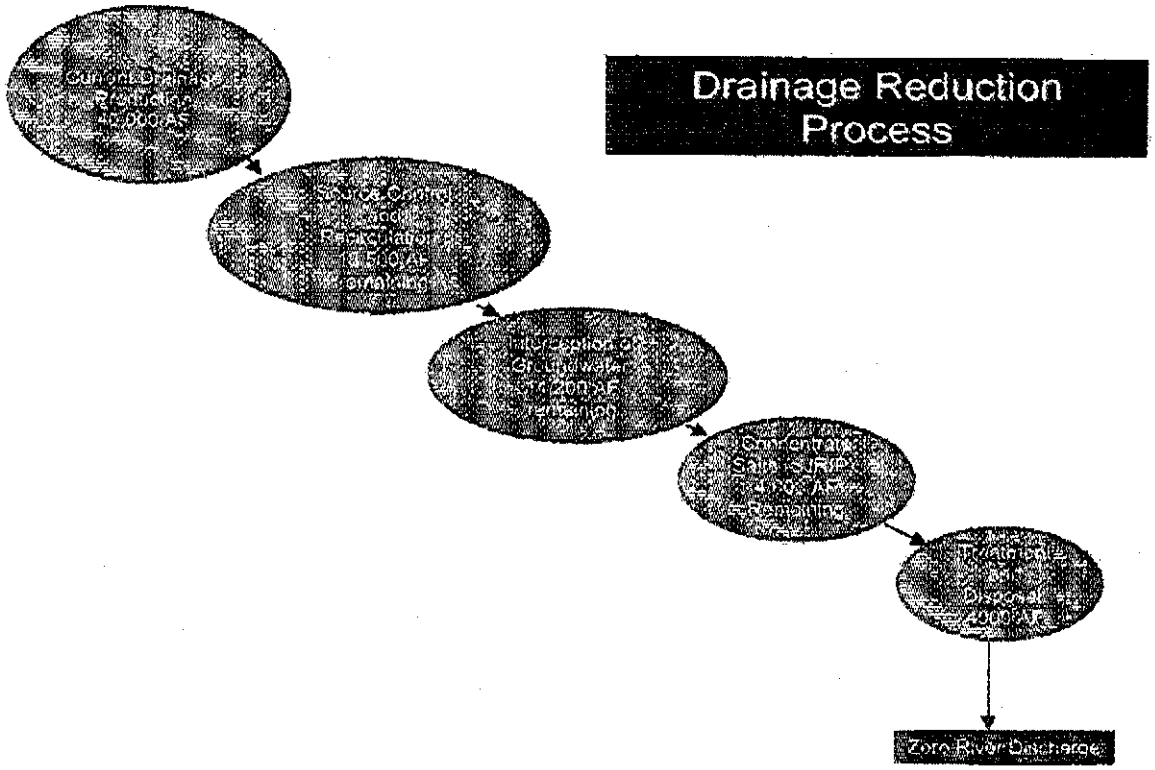


STATE OF CALIFORNIA

Grassland Drainage Area Location Map

SUMMERS ENGINEERING, INC.
Consulting Engineers
HANFORD CALIFORNIA
AUGUST 2005

Attachment 4



Attachment 5

In-Valley Drainage Solution Funding Needs
Updated January 2006

Previous Drainage Management Expenditures	
$600,000	Grassland Bypass Project
$6,265,300	Recirculation Systems
$7,534,794	Irrigation Improvements
$12,000	Road Watering Project
$14,412,094	**Total**

Previous San Joaquin River Improvement Project Expenditures	
$17,500,000	Reuse Land Purchase
$2,782,200	Reuse Land Development
$4,452,000	Pilot Treatment Projects
$24,734,200	**Total**

Future Funds Needed to Complete the In-Valley Solution	
$20,820,000	Reuse Project Expansion
$1,320,000	Broadview Water District Reuse Project
$20,640,000	Irrigation Improvements
$10,790,000	Conveyance Facilities Improvements
$23,430,000	Treatment and Disposal
$3,000,000	Westlands Water District Shallow Groundwater Pumping
$12,000,000	Deep Groundwater Pumping
$92,000,000	**Total**

Attachment 6

San Luis & Delta-Mendota Water Authority
Project Summaries
Updated November 11, 2005

Line No.	Funding Source	Title	Sponsor	Description
	Current Projects			
1	SWRCB Ag Water Quality Grant Program	Irrigation Systems Improvement Project (ISIP)	WWD, SWRCB	Funds used for growers to install more efficient on farm irrigation systems
2	CALFED Drinking Water Program - Prop 13	Water Conservation	WWD, DWR	ISIP Program, SCADA Project, Satellite Imagery, Water Conservation
3	Prop 13 - Water Use Efficiency	SCADA System	WWD, DWR	Perform analysis for remote metering in the District
4	CALFED Drinking Water Program - Prop 13	Orestimba Creek Watershed - Agricultural Water Quality Pilot Program	CURES	Identify and design BMP's for reduction of discharge from the Orestimba Creek watershed.
5	PRISM Grant - Dept of Pesticide Regulation	PIN No. 17 - Western San Joaquin Valley Pesticide BMP Implementation Program	SJVDA - Transferred to SL&D-MWA June 21, 2004	Demonstrate an achievable reduction of chlorpyrifos in drainage water discharging from the tributary watershed of Orestimba Creek into the San Joaquin River from alfalfa, vegetable and other row crop farms
6	CALFED Drinking Water Program - Prop 13	PIN No. 471 - Agricultural Discharge Management Program Monitoring and Evaluation - West Stanislaus County	SJVDA - Transferred to SL&D-MWA August 5, 2004	Examine and evaluate four BMP strategies currently being used in the region for the control of sediments and pesticides: drainage retention ponds (reservoirs), constructed wetlands, vegetated ditches and PAM applications.
7	CALFED Directed Action Proposal	Monitoring and Investigations of the San Joaquin River and Tributaries Related to Dissolved Oxygen	SJVDA	Perform monitoring and analysis of the existence and fate of constituents discharged from the east and west side of the San Joaquin River upstream of Stockton that contribute to the dissolved oxygen deficit in the Stockton deep water ship channel
8	Prop 13	San Luis Drain Oxygen Demand Reduction Project	Grassland Basin Drainers - Transferred to the SL&D-MWA January 28, 2004	Scientific study of algae growth in the San Luis Drain with the objective of understanding factors controlling algal biomass and total organic carbon production in this system.
9	DWR -Prop 204		SL&D-MWA	
10	CALFED	Algal Bacterial Selenium Reduction - Intermediate Scale Facility	Panoche DD	Construction

Attachment 6

San Luis & Delta-Mendota Water Authority
Project Summaries
Updated November 11, 2005

Line No.	Funding Source	Title	Sponsor	Description
11	USBR - Appropriations	RP5/RP6 Project	Panoche DD	SJRIP Improvement
12	SWRCB - Ag Drainage Loan Program	ADLP	Panoche DD	Loans for Irrigation Improvement
13	USBR - Reimbursement Fund	Halophyte Development Project	Panoche DD	SJRIP Improvement
14	USBR - Appropriations	SJRIP Development	Panoche DD	SJRIP Improvement
15	CALFED/Prop 13	Panoche Creek Stabilization Project	Westside RCD	Low Flow Crossing on Panoche Creek
16	CALFED ERP	Panoche-Silver Creek Assessment	Westside RCD	Develop BMP's on Big Panoche, designate sites for erosion implementation projects, make connection between BMPs
17	CALFED Watershed Grant	Silver Creek Watershed Assessment	Westside RCD	Watershed Assessment for Silver Creek & Panoche Alluvial Fan
18	CALFED/Prop 13	Salt - Martinez Creeks Watershed Assessment	Westside RCD	Watershed Assessment for Salt & Martinez Creeks
19	Department of Water Resources	Cantua/Salt Creek Watershed Management Plan	Westside RCD	Watershed Management Plan for Cantua/Salt Creek Watershed
20	Department of Water Resources	Arroyo Pasajero Watershed Project Implementation Grant	Westside RCD	Project Implementation for Arroyo Pasajero and Domengine Watersheds
21	CALFED/Prop 13	Domengine Planning Grant	Westside RCD	Watershed Management Plan for Domengine Watershed
22	BLM Assistance Grant	Weed Abatement Grant	Westside RCD	Removal of noxious and Invasive Plants in Western Fresno County
23	CALFED Watershed Grant	Arroyo Pasajero Project Implementation Grant	Westside RCD	Project Implementation for BMP's in Arroyo Pasajero Watershed
24	CALFED/DOC	Watershed Coordinator Grant	Westside RCD	Funding of Watershed Coordinator
25	Wildlife Conservation Board	Ecological Reserve Restoration	Westside RCD	Funding to restore Fish & Game ecological reserve
26	Packard Grant	Kester Ranch Project Implementation	Westside RCD	Funding to implement BMP's on Kester Ranch
27	Prop 204	Drainage Master Contract 460000534	Westside RCD	Funding various tasks on salt/drainage management
28	USBR	Drainage Treatment and Restoration of Retired Lands	Westside RCD	Drainage treatment at Red Rock Ranch and restoration in section 10
29	SWRCB 319(h)	IFDM Manuals	Westside RCD	Technical and Farm Manuals on Integrated, On-farm Drainage Management
	Pending Projects			
30	DHS - Prop 50, Small water System	Panoche Silver Creek Flood Control Project	WWD, City of Mendota	Obtain funding to complete the environmental and design work for Panoche Silver Creek Flood Control

Attachment 6

San Luis & Delta-Mendota Water Authority
Project Summaries
Updated November 11, 2005

Line No.	Funding Source	Title	Sponsor	Description
31	CALFED Water Use Efficiency Grant	Decision support for implementation and evaluation of agricultural water reuse best management practices to improve district-level irrigation efficiency	Patterson ID	Marshall Road type reservoir on district's north side, return water storage and delivery
32	SWRCB Ag Water Quality Grant Program - Prop 50 or Federal 319(h)	Real-time salt & nutrient drainage load reduction strategies - PIN 2168	Patterson ID & W. Stan ID	Marshall Road type reservoir on district's north side, return water storage and delivery and comparing it to private reservoir project in W. Stan
33	SWRCB Ag Water Quality Grant Program - Prop 50 or Federal 319(h)	San Joaquin River Water Quality Improvement Project - Reuse Development -PIN 1278	Panoche DD	
34	SWRCB	ABSR Continuing Operations	Panoche DD	Operation and investigation
35	DWR Water Use Efficiency	Optimizing a Tail Water Return System	Del Puerto WD	BMP Construction Project for tail water recovery and monitoring
36	SWRCB- Ag Drainage Loan Program	ADLP	Del Puerto WD	Fund installation of Irrigation & Drainage systems to improve water efficiency and reduce drainage.
37	SWRCB Ag Water Quality Grant Program - Prop 50	Westside San Joaquin Watershed Irrigated Agricultural Water Quality Implementation Project-PIN 2146	CURES, DPWD, CCID, PID	Watershed Characterization, implement tailwater return system BMP's, monitor & outreach .
38	USBR - Appropriations	Study to examine drainage reduction due to buried drip tape.	Westlands WD, Panoche DD	Match includes $59,000 from ITRC and $21,000 from sponsors.
39	SWRCB Ag Water Quality Grant Program - Prop 50 or Federal 319(h)	Adaptive, coordinated real-time management of wetland drainage - PIN 2216	Grassland Water District	

G:\data\SPRDSHTS\SJVDA\[Grant Summaries Nov 2005.xls]Grant Summary

SUMMERS ENGINEERING
887 N. Irwin St. – PO Box 1122
Hanford, CA 93232
(559) 582-9237 FAX (559) 582-7632

FAX COVER

Number of Pages 19
(Including Cover Page)

TO: Selicia Potter
Acting Clerk to the Board
State Water Resources Control Board
Fax 916-341-5620

FROM: Joseph C. McGahan

DATE: January 20, 2006

SUBJECT: COMMENT LETTER - 1/31/06 BOARD WORKSHOP on Salinity

Comments or Remarks:

Attached is a comment letter for the above workshop. A copy has also been emailed.